<u>Amendments to the Specification</u>:

Please amend the first paragraph on page 1 as follows:

The invention, in general relates to a method and to an apparatus for defining and at least partially correcting image data and, more particularly, to the definition and correction of data used to form an image on a video or projection screen as well as on other electronic image ~~forming~~ <u>reproduction</u> devices.

Please amend the second paragraph on page 2 as follows:

The field of use of the invention is by no means restricted to the correction of image data errors, i.e. the reduction or elimination of unndesirable changes in image data occurring in a real image reproduction systems as opposed to an ideal system. Basically, the invention may be used in connection with systems in which image data provided for image formation are subjected, prior to their input into the image reproduction system, to modifications definable by predetermining the result of modifying original image ~~date~~ <u>data</u> into transformed image data, as, for instance, on the basis of test images.

Please amend the second paragraph on page 4 as follows:

The calculation of the corrective values is complex, and it is valid only for the analyzed image point sites. In respect of intermediate positions, the known methods require interpolations. This, too, is complex and provides no more than a mere approximation. Moreover, if is possible to correct only individual errors, primarily those relating to the geometry of an image. Other errors in the transmission characteristics of the reproduction system are not being addressed. The known methods require manipulation of control electronics or mechanical or optical system. In some instances it is even necessary to modify the image or projection screens. Another disadvantage is that the calculation of the corrective values has to be repeated each time an image is ~~reproduction~~ <u>reproduced</u> and for each image reproduction system used.

Page 4, please amend the last two paragraphs as follows:

It is, therefore, a general object of the invention to provide a method and related apparatus for ~~forming~~ <u>reproducing</u> images of superior quality.

A more specific object relates to a method and to an apparatus which avoid the necessity of manipulating electronic, mechanical or optical systems of an image ~~forming~~ <u>reproducing</u> apparatus.

Please amend the first paragraph on page 5 as follows:

Yet another object of the invention is to provide a method and an apparatus for ~~forming images of superior quality by simply~~ modifying image forming data <u>to be reproduced</u> to control all of the transmission properties of an image ~~forming~~ <u>reproduction</u> system.

Page 5, please amend the third paragraph as follows:

In a preferred embodiment of the invention there is provided an apparatus including circuitry for accommodating a neuronal net the outputs of which are connected to the inputs of an image ~~forming~~ <u>reproducing</u> system and the parameters of which have been established in a preceding learning step based upon a test image of predetermined quality, a storage for image forming data connected to the inputs of the neuronal net, and an image recording device for generating digitized image data of an

uncorrected _reproduced_ image of the test image and connected to

the inputs of the neuronal net for a time necessary to define the

parameters of the neuronal net during the learning process.

Page 6, please correct the second, third and fourth

paragraphs as follows:

~~The target data, i.e. the learning~~ In the learning phase,

the input pattern for the neuronal net is ~~a digitized image of~~ an

uncorrected test image produced by the image reproduction system

captured by an image recording device such as a camera. The

actual digital image data of the test image directly define the

~~learning pattern~~ target data for the training process.

Following the learning process, the inputs of the neuronal

net are fed with data of the image to be reproduced, and its

outputs provide direct pixel input values for the image

reproduction system which will thus be provided with pre-

corrected _original_ image data. In this manner, any errors in the

transmission behavior of image formation, optics and projection

of any images to be reproduced will have been ~~checked and, if~~

~~necessary,~~ corrected so that as a result of having been

compensated or corrected errors will no longer be visible on the projection or image forming screen.

The special advantage of the invention is, therefore, that neither deflection 20 nor intensity modulation of the image reproduction system require manipulation, or that the image or projection screens need ~~by~~ <u>to be</u> modified.

Page 8, please amend the paragraph following the heading as follows:

The images to be reproduced (Fig. 1) are stored in digitized format in a computer connected to an image reproduction device such as a computer. <u>The term "computer" in Fig. 1 stands for hardware and/or software components to perform training and recall of the neural network for correction.</u>

Page 8, please amend the second paragraph following the heading as follows:

The method is carried out in two steps: The first step is a learning step (balancing), which is followed by the actual

operation. An image recording device, e.g. an electronic camera, is used for balancing the correction and for taking an exposure of a test image which is stored in a computer or other appropriate circuitry. To avoid further errors, the image ~~receiving~~ recording device must be of a higher image quality than the image reproduction device to be corrected. Otherwise, interfering image forming characteristics of the image ~~forming~~ recording device will have to be compensated prior to further processing.

Page 9, please amend the second paragraph as follows:

Balancing of the system for correction is carried out by training the neuronal net with a computer. The test image which contains the errors to be corrected is digitally stored as a teaching pattern and is used to gather learning data for the artificial neuronal network. Since the test image is stored free of errors in the computer, it directly defines the target training pattern of the training process.

Page 9, please amend the fourth paragraph as follows:

Once the learning step is completed, the inputs of the neuronal net will be fed <u>with</u> data of an image to be reproduced, and the outputs of the neuronal net will be pixel values for direct input to an image reproduction device which is thus stimulated ~~or energized by corrected~~ <u>by modified original</u> image forming data. The conversion program of the balanced correction system may be provided by a conventional PC or by an application specific circuit. In a manner distinct from European patent application 934,653, no manipulation of the deflection and intensity modulation of the image forming device is necessary.

IN THE ABSTRACT:

Please substitute the enclosed Abstract for the Abstract currently on file.